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EXAMINER

JONES, HUGH M

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Paper No. 13

Application Number: 09/320,303

Filing Date: 5/26/1999

Appellant(s): Aves

Steven M. Hoffberg

For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 12/30/2002.

(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is incorrect. Appellants have listed the *issues*. A correct statement of the *status* of the claims is as follows: *All claims have been finally rejected.*

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) *Summary of Invention*

The summary of invention contained in the brief is deficient because the brief does not contain a concise explanation of the invention defined in the claims involved in the appeal, which refers to the specification by page and line number, and to the drawing, if any, by reference characters as required by 37 CFR 1.192(c)(5). Appellants have provided an exposition of the invention (pp. 2-3) which is not reflected in the claims, and has not specifically indicated where the *claim limitations* are supported in the specification. Furthermore, Appellants improperly introduce arguments relating to prior art techniques and alleged advantages of the present invention.

(6) *Issues*

Appellant's brief refers to drawing objections (prior art drawings) and improper submission of information (Information Disclosure Statement) as appealable issues (items 1-2). These issues relate to *petitionable subject* matter under 37 CFR 1.181 and not to appealable subject matter. See MPEP § 1002 and § 1201.

Appellants have not indicated that a 112(1) "written description rejection" is outstanding (although they make allegations [second full paragraph, page 9, Appeal Brief] that they have satisfied the requirements for written description). Please see paragraphs 6-11 (112(1) written description rejection applied in the first Official Office Action) in paper # 4; paragraphs 6-11 (112(1) written description rejection), paragraph 36 (response to Appellant's arguments wherein the Examiner noted that Appellants treated the written description rejection as if it were an enablement rejection) in paper # 7 (final rejection). Appellants have been advised of the written description rejection throughout prosecution of the instant application.

(7) *Grouping of Claims*

The appellant's statement in the brief that certain claims do not stand or fall together is not agreed with. Appellants have *merely pointed out differences in what the claims cover*. Section 1200 provides guidance:

(7) Grouping of Claims. For each ground of rejection which appellant contests and which applies to a group of two or more claims, the Board shall select a single claim from the group and shall decide the appeal as to the ground of rejection on the basis of that claim alone, unless a statement is included that the claims of the group do not stand or fall together and, in the argument section of the brief (37 CFR 1.192(c)(8)), appellant explains why the claims of the group are believed to be separately patentable. Merely pointing out differences in what the claims cover is not an argument as to why the claims are separately patentable. If an appealed ground of rejection applies to more than one claim and appellant considers the rejected claims to be separately patentable, 37 CFR 1.192(c)(7) requires appellant to state that the claims do not stand or fall together, and to present in the appropriate part or parts of the argument under 37 CFR 1.192(c)(8) the reasons why they are considered separately patentable. The absence of such a statement and argument is a concession by the applicant that, if the ground of rejection were sustained as to any one of the rejected claims, it will be equally applicable to all of them. 37 CFR 1.192(c)(7) is consistent with the practice of the Court of Appeals for the Federal Circuit indicated in such cases as *In re Young*, 927 F.2d 588, 18 USPQ2d 1089 (Fed. Cir. 1991); *In re Nielson*, 816 F.2d 1567, 2 USPQ2d 1525 (Fed. Cir. 1987); *In re King*, 801 F.2d 1324, 231 USPQ 136 (Fed. Cir. 1986); and *In re Sernaker*, 702 F.2d 989, 217 USPQ 1 (Fed. Cir. 1983). 37 CFR 1.192(c)(7) requires the inclusion of reasons in order to avoid unsupported assertions of separate patentability. The reasons may be included in the appropriate portion of the "Argument" section of the brief. For example, if claims 1 to 4 are rejected under 35 U.S.C. 102 and appellant considers claim 4 to be separately patentable from claims 1 to 3, he or she should so state in the "Grouping of claims" section of the brief, and then give the reasons for separate

patentability in the 35 U.S.C. 102 portion of the "Argument" section (i.e., under 37 CFR 1.192(c) (8) (iii)). In the absence of a separate statement that the claims do not stand or fall together, the Board panel assigned to the case will normally select the broadest claim in a group and will consider only that claim, even though the group may contain two broad claims, such as "ABCDE" and "ABCDF.". The same would be true in a case where there are both broad method and apparatus claims on appeal in the same group. *The rationale behind the rule, as amended, is to make the appeal process as efficient as possible*. Thus, while the Board will consider each separately argued claim, the work of the Board can be done in a more efficient manner by selecting a single claim from a group of claims when the appellant does not meet the requirements of 37 CFR 1.192(c)(7). It should be noted that 37 CFR 1.192(c)(7) requires the appellant to perform two affirmative acts in his or her brief in order to have the separate patentability of a plurality of claims subject to the same rejection considered. The appellant must (A) state that the claims do not stand or fall together and (B) present arguments why the claims subject to the same rejection are separately patentable. Where the appellant does neither, the claims will be treated as standing or falling together. Where, however, the appellant (A) omits the statement required by 37 CFR 1.192(c)(7) yet presents arguments in the argument section of the brief, or (B) includes the statement required by 37 CFR 1.192(c)(7) to the effect that one or more claims do not stand or fall together (i.e., that they are separately patentable) yet does not offer argument in support thereof in the "Argument" section of the brief, the appellant should be notified of the noncompliance as per 37 CFR 1.192(d). Ex parte Schier, 21 USPQ2d 1016 (Bd. Pat. App. & Int. 1991); Ex parte Ohsumi, 21 USPQ2d 1020 (Bd. Pat. App. & Int. 1991).

Furthermore, *Appellants have never previously argued the claims as other than a single group*. Please refer to pages 8-10 (paper # 5 - Appellants first response); pages 8-10, paper # 8 - Appellants' second response). Furthermore, Appellants' have provided not presented any rationale or explanation for their grouping in the sections entitled "Grouping of Claims" or in "Arguments". In the "Arguments" section, Appellants have essentially only *recited the prior art teaching followed by a recitation of the claims* without pointing out the *patentable distinction*. Therefore, the Examiner considers the claims as a *single group*.

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

The following is a listing of the prior art of record relied upon in the rejection of claims under appeal.

5,218,326

Fleming-Dahl

6-1993

Huss, S. "A mathematical and lumped-element model for multiple cascaded lossy transmission lines with arbitrary impedances and discontinuities", IEEE ISCAS '95, (May 3, 1995), pp. 1844-1847.

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

- Claims 1-25 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specification broadly refers to transmission lines. However, the specification does not provide any substantive detail, other than mere reference, to a model, characteristic values, transfer functions, algorithms, distributions, and means for optimization (see claim 1, for example).

- Claims 1-25 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification broadly refers to transmission lines. However, the specification does not provide any substantive detail, other than mere reference, to a model, characteristic values, transfer functions, algorithms, distributions, and means for optimization (see claim 1, for example).

- Claims 8-9, 17-20, 22-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- "transfer function" (see claims 1 and 3, for example). A transfer function involves two entities (something with respect to something else). The specification does not clarify the meaning of the word.

- Claims 10-18, 21-25 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. Applicants have not claimed the details which are necessary for carrying out the optimization.

- Claims 1-9 and 19-20, 22-25 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. Applicants have not claimed the elements which are necessary for carrying out the optimization.

- Claims 10-11 and 13-21 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Fleming-Dahl (F: U. S. Patent 5,218,326 - of record).

- Claims 1-9, 12 and 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over [Fleming-Dahl "F" (U. S. Patent 5,218,326 - of record) in view of Huss "H"].

(11) Response to Argument

Response to Argument - Petitionable Matter

Appellant's brief presents arguments relating to objections to drawings (prior art drawings) and improper submission of information (Information Disclosure Statement).


These issues relate to *petitionable subject* matter under 37 CFR 1.181 and not to appealable subject matter. See MPEP § 1002 and § 1201.

Response to Argument - Petitionable Matter - Information Disclosure

This is a non-appealable issue. The submission of the attachment to paper # 5 failed to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because it was not a proper Information Disclosure Statement. It was been placed in the application file, but the information referred to therein was not been considered as to the merits. Applicant was advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609 C(1). Appellants have provided no legal authority for their position the submitted prior art must be considered in the absence of an Information Disclosure Statement. The fact that Appellants admission that the submitted material is indicative of the "status" of the prior art indicates that the material is indeed relevant to the examination of the application and further constitutes admitted prior art. In any case, the Examiner is very familiar with the prior art including "air spaced transmission lines".

Response to Argument - Petitionable Matter - Objection to the Drawings

This is a non-appealable issue. Figure 13 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See Applicant's Own Admission page 4, paper # 5, specification. See MPEP § 608.02(g). In any case,



Appellants have only provided circular reasoning. The Examiner notes that the figure shows a transmission line with three equal segments.

Response to Argument - 112 Enablement Rejections

The Board is invited to review Appellant's specification with the following arguments in mind. The 112(1) rejections allege the following:

"The specification broadly refers to transmission lines. However, the specification does not provide any substantive detail, other than mere reference, to a model, characteristic values, transfer functions, algorithms, distributions, and means for optimization (see claim 1, for example)."

Appellants have provided voluminous and varied arguments pertaining to enablement for their claimed invention. However, consider the specification. The "Detailed Description of the Preferred Embodiments" constitute pages 13-18 of the specification. Page 14, lines 1-20 of page 15, page 16-17 only refer to results after using the invention. This leaves page 13; lines 21-23 of page 15, and lines 1-3 of page 18 to disclose Appellant's invention.

Page 13 refers to the following features:

- *model* of a transmission line (line 9);
- *building the model* using *parameters* (lines 9-10);
- an *algorithm* (line 13);
- more *complex analysis* (line 14);
- *adjusting* each line according to a *predefined criterion* (lines 15-16);
- *optimization* (line 21).

However, there is no substantial detail pertaining to making and/or using such features without undo experimentation. The Examiner respectfully, does not know what the model is, how to build it with parameters, what the algorithm is, and how the optimization is carried out. For example, the Examiner originally presumed that the model was somehow based on a lumped element transmission line model (the commonly known telegrapher's RLC equations) - however, Appellants arguments (see last paragraph, page 13, denigrating lumped models) appear to indicate that *model* is to mean something else.

Lines 1-3, page 18 conclude that the invention includes "*calculating the vector algebra results for various line lengths*". However, there is *no* disclosure in this section pertaining to such a calculation. *Transfer functions* are not even mentioned in the Detailed Description.

Appellants also refer to the section of the specification entitled "Summary of the Invention) in support of arguments against the 112 rejections (pp. 10-11, Appeal Brief). In that material, Appellants refer broadly to circuit parameters, Laplace, Thevenin and Norton and vector calculus which references stepped impedance, attenuation, dielectric constant, "capacitive discontinuity" and bandwidth. The Examiner agrees that most of these topics are well known in the prior art (although the Examiner is not sure as to Appellants meaning for "capacitive discontinuity", which does not appear to have been discussed previously during prosecution). However, such features can be combined in a multitude of various ways to produce some unknown and undisclosed model wherein combinations of transmission lines are somehow "optimized". The claims refer to the following:

- *model* of a transmission line;
- *building the model* using *parameters*;
- an *algorithm*;
- *adjusting* each line according to a *predefined criterion*;
- *optimization*.

However, there is no substantial detail pertaining to making and/or using such features without undo experimentation. The Examiner, respectfully, does not know what the model is, how to build it with parameters, what the algorithm is, and how the optimization is carried out.

Furthermore, the specification as recited in the Appeal Brief (paragraph beginning with "The available engineering analysis programs ..." page 10, Appeal Brief) appears to refer to some software package (which was one reason the Examiner requested the computer code - the other reason was for evidence of a working model, as per 112(1) considerations) - however, no substantial details have been provided.

Appellants refer to a search within the USPTO database and to known prior art in support of arguments against the 112(1) rejections. Applicants again argue (page 4, paper # 5, pages 9, Appeal Brief) that Maxwell's equations and their relationship to transmission lines are well known. The Examiner *again* agrees - however, that was never the issue (the Examiner is again accused of making an incredible argument that one of ordinary skill in the art would not understand transmission lines - see first paragraph, page 7, Appeal Brief), as the Examiner has tried to explain. In any case, and following up on Applicant's earlier argument (page 4, paper # 5) relating to automobiles and gravity, the Examiner noted that while the laws of gravity may not need to be recited to

understand automobiles, the relevant teachings about automobiles do, in fact, need to be disclosed, especially automobile *models*, if that is the claimed invention. In the present situation, Applicant's specification broadly refers to transmission lines. However, as recited in the 112(1) rejections, *the specification does not provide any substantive detail*, other than mere reference, to a *model, characteristic values, transfer functions, algorithms, distributions, and means for optimization* (see the limitations in claim 1, for example). *Appellants have not actually or persuasively argued the merits of the 112(1) rejection*, specifically whether the *instant specification* is enabled. Furthermore, Appellants have not adequately or persuasively addressed the Examiner's responses to Appellants' arguments. Instead, Appellants have only apparently argued that the *prior art* is enabled and that this enablement carries over to Appellants' specification. In any case, and *to the extent that it is relevant*, Appellants comments about whether the prior art is enabled are only the *opinion* of the Appellants. Appellants have not provided an affidavit in support of their arguments.

Appellants also attempt to argue that the Examiner has not made a prima facie case as it pertains to the 112(1) rejections. The claims refer to the following:

- *model* of a transmission line;
- *building the model* using *parameters*;
- an *algorithm*;
- *adjusting* each line according to a *predefined criterion*;
- *optimization*.

However, there is no substantial detail pertaining to making and/or using such features without undue experimentation. The Examiner, respectfully, does not know what the

model is, how to build it with parameters, what the algorithm is, and how the optimization is carried out. As stated in MPEP section 2164.05 (Determination of Enablement Based on Evidence as a Whole):

“Once the examiner has weighed all the evidence and *established a reasonable basis to question the enablement* provided for the claimed invention, the burden falls on applicant to present persuasive arguments, supported by suitable proofs where necessary, that one skilled in the art would be able to make and use the claimed invention using the application as a guide. In re Brandstadter, 484 F.2d 1395, 1406-07, 179 USPQ 286, 294 (CCPA 1973). The evidence provided by applicant need not be conclusive but merely convincing to one skilled in the art.

Applicant may submit factual affidavits under 37 CFR 1.132 or cite references to show what one skilled in the art knew at the time of filing the application. A declaration or affidavit is, itself, evidence that must be considered. The weight to give a declaration or affidavit will depend upon the amount of factual evidence the declaration or affidavit contains to support the conclusion of enablement. In re Buchner, 929 F.2d 660, 661, 18 USPQ2d 1331, 1332 (Fed. Cir. 1991) (“expert’s opinion on the ultimate legal conclusion must be supported by something more than a conclusory statement”); cf. In re Alton, 76 F.3d 1168, 1174, 37 USPQ2d 1578, 1583 (Fed. Cir. 1996) (declarations relating to the written description requirement should have been considered).

Applicant should be encouraged to provide any evidence to demonstrate that the disclosure enables the claimed invention. In chemical and biotechnical applications, evidence actually submitted to the FDA to obtain approval for clinical trials may be submitted. However, considerations made by the FDA for approving clinical trials are different from those made by the PTO in determining whether a claim is enabled. See Scott v. Finney, 34 F.3d 1058, 1063, 32 USPQ2d 1115, 1120 (Fed. Cir. 1994) (“Testing for full safety and effectiveness of a prosthetic device is more properly left to the [FDA].”). Once that evidence is submitted, it must be weighed with all other evidence according to the standards set forth above so as to reach a determination as to whether the disclosure enables the claimed invention.

To overcome a prima facie case of lack of enablement, applicant must demonstrate by argument and/or evidence that the disclosure, as filed, would have enabled the claimed invention for one skilled in the art at the time of filing. This does not preclude applicant from providing a declaration after the filing date which demonstrates that the claimed invention works. However, the examiner should carefully compare the steps, materials, and conditions used in the experiments of the declaration with those disclosed in the application to make sure that they are commensurate in scope; i.e., that the experiments used the guidance in the specification as filed and what was well known to one of skill in the art. Such a showing also must be commensurate with the scope of the claimed invention, i.e., must bear a reasonable correlation to the scope of the claimed invention. The examiner must then weigh all the evidence before him or her, including the specification and any new

evidence supplied by applicant with the evidence and/or sound scientific reasoning previously presented in the rejection and decide whether the claimed invention is enabled. The examiner should never make the determination based on personal opinion. The determination should always be based on the weight of all the evidence."

Appellants have *provided no evidence* that *the specification does provide any substantive detail*, other than mere reference, to a *model, characteristic values, transfer functions, algorithms, distributions, and means for optimization*.

Appellants also refer to the incorporated material in support of arguments against the 112 rejections (pp. 10-11, Appeal Brief). There is no incorporation by reference in the Detailed Description section to provide further enablement or written description support. There is incorporation by reference in the section entitled *background of the related art* - however, this appears to only disclose the state of the prior art teachings and is not incorporated for any specific purpose, such as to supply missing details, as now argued by Appellants (last paragraph, page 8, wherein Appellants have over-simplified section 608.01(p) of the MPEP). *The doctrine of incorporation by reference is of no avail to applicants in this regard since there is no specific indication in the instant specification of the particular features disclosed by the incorporated references which correspond to those as claimed; nor does the specification identify the specific portions of the patent which applicant may have intended to rely upon to supplement his disclosure.* The purpose of incorporation by reference in an application of matter elsewhere written down is for economy, amplification, or clarity of exposition, by means of an incorporating statement clearly identifying the subject matter which is incorporated and where it is to be found. In re de Seversky, 474 F.2d 671, 177 USPQ 144, (CCPA 1973).

In any case, Appellants have not indicated where the listed features, namely:

- *model* of a transmission line (line 9);
- *building the model* using *parameters* (lines 9-10);
- an *algorithm* (line 13);
- more *complex analysis* (line 14);
- *adjusting* each line according to a *predefined criterion* (lines 15-16);
- *optimization* (line 21),

exist in the incorporated material.

Appellants provide conclusory and circular arguments (second full paragraph, page 9, Appeal Brief) that since they have disclosed results, that this is proof that they were in possession of the invention. In any case, Appellants have provided no legal authority for their position, except for a reference to Festo. The relevance of Appellants' interpretation of the Festo case is, respectfully, not understood, in the context of Appellants' arguments. *Appellants have not disclosed a model or optimization scheme or algorithm anywhere in the specification. The incorporated material does not cure the deficiency.*

Appellants offer conclusory argument (last paragraph, page 9, Appeal Brief) that the "means for language" does not refer to incorporated material and that the material is clearly described in the specification. However, Appellants are silent as to where the support for the feature is to be found in the specification.

Applicants argue that all essential details about transmission lines were known in the art (page 5, paper # 5), but that the prior art does not teach use of an optimization strategy for modifying the physical structures in order to achieve a given result or constraints. However, Applicants have not adequately argued the asserted rejection.

Applicants still have not explained, for example, how the optimization strategy, as allegedly disclosed and (*which has been argued as being the inventive feature*) in the specification, satisfies the 112 requirements.

The Examiner is persuaded by Appellant's arguments (pg. 8) that "air spaced transmission lines" were known in the art sufficiently well enough that there is not an issue of enablement - as it applies to "air spaced transmission lines".

Applicant's arguments (page 6, paper # 5) relating to "means for" are persuasive as applied to "means for storing", but not to "means for adjusting". The Examiner agrees that a CPU is necessary for the adjusting. However, the CPU must be somehow instructed so as to carry out the *adjusting*. This *adjusting* relates to the optimizing which Applicants argue throughout paper # 5 and the Appeal Brief. The Examiner, respectfully, is not persuaded by Applicant's arguments. Appellants have not explained why the *specification* is enabled, but, instead, provide commentary and opinion about the applied prior art.

Response to Argument - 112 Written Description Rejections

Appellants' argument against the *written description* rejections *again* appears to be the same argument as asserted against the *enablement* rejections. As stated in paragraph 26 paper # 7 and in paragraph 8, paper 4, *the 112 rejections for enablement and written description are separate and distinct issues as it relates to the question of incorporation by reference*. A rejection based on the enablement requirement of the statute may not be sustainable in this regard since the general incorporation of a U.S. patent by reference in appellant's specification may be sufficient to indicate what is likely

to be known by persons of ordinary skill in the art. Cf. *In re Howarth*, 654 F.2d 103, 210 USPQ 689 (CCPA 1981). *The issue of compliance with the description requirement, however, is another matter entirely.* In this connection, attention is directed to *In re Blaser*, 556 F.2d 534, 194 USPQ 122, 125 (CCPA 1977). The function of the description requirement is to ensure that the applicant had possession, as of the filing date of his application, of the specific subject matter later claimed by him. It is required that the specification describe the invention sufficiently for those of ordinary skill in the art to recognize that the applicant invented the subject matter he now claims. *In re Smythe*, 480 F.2d 1376, 178 USPQ 279, 284 (CCPA 1973). That a person skilled in the art, given the incorporated disclosures, *might* decide to combine the teachings with those explicitly disclosed by Applicants is not a sufficient indication to that person that such is described as a particular feature of appellant's invention. *The doctrine of incorporation by reference is of no avail to applicants in this regard since there is no specific indication in the instant specification of the particular features disclosed by the incorporated references which correspond to those as claimed; nor does the specification identify the specific portions of the patent which applicant may have intended to rely upon to supplement his disclosure.* The purpose of incorporation by reference in an application of matter elsewhere written down is for economy, amplification, or clarity of exposition, by means of an incorporating statement clearly identifying the subject matter which is incorporated and where it is to be found. *In re de Seversky*, 474 F.2d 671, 177 USPQ 144, (CCPA 1973). Please see paragraphs 6-10, paper # 4.

See Section 2163.02 of the MPEP Standard for Determining Compliance With the Written Description:

"The courts have described the essential question to be addressed in a description requirement issue in a variety of ways. *An objective standard for determining compliance with the written description requirement is, "does the description clearly allow persons of ordinary skill in the art to recognize that he or she invented what is claimed."* In re Gosteli, 872 F.2d 1008, 1012, 10 USPQ2d 1614, 1618 (Fed. Cir. 1989). Under Vas-Cath, Inc. v. Mahurkar, 935 F.2d 1555, 1563-64, 19 USPQ2d 1111, 1117 (Fed. Cir. 1991), *to satisfy the written description requirement, an applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention, and that the invention, in that context, is whatever is now claimed. The test for sufficiency of support in a parent application is whether the disclosure of the application relied upon "reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter."* Ralston Purina Co. v. Far-Mar-Co., Inc., 772 F.2d 1570, 1575, 227 USPQ 177, 179 (Fed. Cir. 1985) (quoting In re Kaslow, 707 F.2d 1366, 1375, 217 USPQ 1089, 1096 (Fed. Cir. 1983)).

Whenever the issue arises, the fundamental factual inquiry is whether a claim defines an invention that is clearly conveyed to those skilled in the art at the time the application was filed. The subject matter of the claim need not be described literally (i.e., using the same terms or in haec verba) in order for the disclosure to satisfy the description requirement. If a claim is amended to include subject matter, limitations, or terminology not present in the application as filed, involving a departure from, addition to, or deletion from the disclosure of the application as filed, the examiner should conclude that the claimed subject matter is not described in that application. This conclusion will result in the rejection of the claims affected under 35 U.S.C. 112, first paragraph - description requirement, or denial of the benefit of the filing date of a previously filed application, as appropriate. 220 F.3d 1345, 55 U.S.P.Q.2d (BNA) 1636 (Fed. Cir. 2000)."

With respect to "means for" claims (see claim 1, for example), see Atmel Corp. v. Information Storage Device, Inc., 198 F.3d 1374 (Fed. Cir. 1999). In *Atmel*, the Federal Circuit reversed summary judgment that a means-plus-function claim was invalid for indefiniteness because the corresponding structure was in an article that had been incorporated by reference. Here, the majority explained that the search for corresponding

structure should be done from the vantage point of one skilled in the art (i.e., the structure need not be explicit if it would clear to a skilled artisan). The court went on to say that the structure supporting the means-plus-function element must appear in the specification.

A patent may not rely on a document that is incorporated by reference to support structure corresponding to a means-plus-function limitation in a claim. The structure corresponding to the recited function must be described within the four corners of the patent specification. The court also discussed the use of extrinsic evidence to construe a means-plus-function claim and to find corresponding structures.

In any case, the incorporated material does not cure the deficiency.

Response to Argument - 112(2) Rejections

Appellants do not actually address the 112(2) rejections other than to allege that Appellants are entitled to the claim coverage.

Appellants argue (next to last full paragraph, page 6, paper # 5) in response to the 112(2) against the use of “transfer function”, that such functions are well known. The Examiner agrees. However, that is not the issue. *The phrase is indefinite because it has many meanings. The Examiner can not determine the meaning from the claims or the specification.* It could mean impedance, admittance, reflection coefficient or a host of other relationships between inputs and outputs.

Applicants argue (last full paragraph, page 7, paper # 5) in response to the 112(2) “missing elements” rejections (it is noted that Applicants have not specifically addressed the 112(2) “missing steps” rejections and presumes that Applicants are addressing both types of rejections with their response [i.e., last paragraph, page 7 to line 6, page 8, paper # 5]) that:

"The claims, while broad, are distinct and comprehensible, as well as *complete*. In contrast to the Examiner's insinuation, there are no gaps in the claims. In particular, it is not believed necessary to claim the details or elements necessary for carrying out the optimization. *Any optimization method or apparatus now known or in the future envisioned may be applied to solve the problem at hand.* According to the present invention, novelty and non-obviousness reside in the presentation of the problem in such a manner that a variety of optimization schemes and systems may be readily applied."

Appellants have not actually addressed the merits of the rejection other than to opine that the claims are complete. The Examiner would first like to point out that such arguments are mere attorney argument and are conclusory. Please see section 2145 of the MPEP, recited for Applicant's benefit:

"2145 Consideration of Applicant's Rebuttal Arguments

I. ARGUMENT DOES NOT REPLACE EVIDENCE WHERE EVIDENCE IS NECESSARY

Attorney argument is not evidence unless it is an admission, in which case, an examiner may use the admission in making a rejection. See MPEP § 2129 and § 2144.03 for a discussion of admissions as prior art. The arguments of counsel cannot take the place of evidence in the record. In re Schulze, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965); In re Geisler, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997) ("An assertion of what seems to follow from common experience is just attorney argument and not the kind of factual evidence that is required to rebut a prima facie case of obviousness."). See MPEP § 716.01(c) for examples of attorney statements which are not evidence and which must be supported by an appropriate affidavit or declaration."

The Examiner would also like to point out that *Applicants indeed must claim the details necessary for carrying out the optimization.* The Examiner notes that the title of the application is "*Method for selecting optimized lengths of a segmented transmission line and a transmission line resulting therefrom*". The Examiner also notes lines 4-14,

page 11, specification, wherein Applicants state that it is an object of the invention to provide a *method for optimizing*. Applicant must *particularly point out and distinctly claim the subject matter which applicant regards as the invention*. See section 2172.01 of the MPEP (Unclaimed Essential Matter). A claim which omits matter disclosed to be essential to the invention as described in the specification or in other statements of record may be rejected under 35 U.S.C. 112, first paragraph, as not enabling. In re Mayhew, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). See also MPEP § 2164.08(c). Such essential matter may include missing elements, steps or necessary structural cooperative relationships of elements described by the applicant(s) as necessary to practice the invention. In addition, a claim which fails to interrelate essential elements of the invention as defined by applicant(s) in the specification may be rejected under 35 U.S.C. 112, second paragraph, for failure to point out and distinctly claim the invention. See In re Venezia, 530 F.2d 956, 189 USPQ 149 (CCPA 1976); In re Collier, 397 F.2d 1003, 158 USPQ 266 (CCPA 1968).

Applicants are also reminded that they have admitted, in response to 112(1) rejections (pp. 3-7, paper # 5; arguments in in the Appeal Brief in response to 112(1) rejections) that the details of transmission lines and their behavior were well known to those skilled in the art at the time of the invention. Applicants state (i.e., last paragraph, page 7 to line 6, page 8, paper # 5) that

“Any optimization method or apparatus now known or in the future envisioned may be applied to solve the problem at hand. According to the present invention, novelty and non-obviousness reside in the presentation of the problem in such a manner that a variety of optimization schemes and systems may be readily applied.

It should be noted that such argument is at odds with the first paragraph of 35 U.S.C. 112, namely that the specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention. In particular, Applicant's assertions imply that there is **subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.** It also implies problems with enablement. A claim drafted with such an interpretation would also be rejected as an Omnibus claim. See MPEP 2173.05(r) (Omnibus Claim). Some applications are filed with an omnibus claim which reads as follows: A device substantially as shown and described. *This claim should be rejected under 35 U.S.C. 112, second paragraph because it is indefinite in that it fails to point out what is included or excluded by the claim language.* See Ex parte Fressola, 27 USPQ2d 1608 (Bd. Pat. App. & Inter. 1993), for a discussion of the history of omnibus claims and an explanation of why omnibus claims do not comply with the requirements of 35 U.S.C. 112, second paragraph. Such a claim can be rejected using Form Paragraph 7.35. See MPEP § 706.03(d). For cancelation of such a claim by examiner's amendment, see MPEP § 1302.04(b).

In any case, consider claim 10, for example. Claim 10 recites a method for optimizing segment characteristics of transmission lines. Applicants appear to arguing (throughout paper # 5 and the Appeal Brief) firstly that the transmission line art was well

known, secondly that any optimization scheme may be applied and thirdly that the details of the optimization do not have to be claimed. The Examiner is not persuaded by such reasoning. With respect to the argument that the invention is not in the transmission lines or optimization scheme,

“According to the present invention, novelty and non-obviousness reside in the presentation of the problem in such a manner that a variety of optimization schemes and systems may be readily applied.”

The Examiner submits that Applicants have not clearly explained (in paper # 5 or in the Appeal Brief) or claimed how the problem is presented in such a manner to lead to the variety of optimization schemes, as argued.

Response to Argument - 102 Rejections

Fleming-Dahl discloses a method of defining component lengths, especially cable lengths, in a radio frequency or microwave system so as to minimize in-phase coupling of voltage reflections in the system involves the use of prime roots of prime numbers as scaling factors which are multiplied with a minimum component length to obtain a list of potential component lengths. The scaled potential component lengths are then screened for accidental relationships with component lengths obtained using lower order roots in order to prevent accidental harmonic relationships from arising in the system, and the resulting screened list is evaluated to ensure that the remaining potential component lengths meet such system requirements as available spans, minimum

and maximum component lengths, number of lengths required, and *matched Insertion Loss requirements*. In order to screen the scaled potential component lengths, windows are constructed around the potential lengths based on component *manufacturing tolerances*, and subsequently adjusted as necessary.

The claims are recited and the correspondence to the prior art is noted.

- **Claim 10** pertains to a method for optimizing the segment characteristics of a segmented transmission line, comprising the steps of modeling the electrical performance of the segmented transmission line, evaluating the model for electrical performance (F: col. 1, line 31 to col. 2, line 17; col. 2, lines 41-54; col. 3, lines 10-20; col. 4, lines 14-32), and selecting a set of segment characteristics (F: abstract; figures 1-7; col. 2, line 66 to col. 4, line 20; col. 4, line 52 to col. 6, line 19; col. 7, lines 23-61), based on the evaluation, which meets a set of predefined optimization criteria (F: abstract; col. 1, line 31 to col. 2, line 17; col. 2, lines 41-54; col. 3, lines 10-20; col. 4, lines 14-32).

- **Claim 11** pertains to the method according to claim 10, wherein the set of segment characteristics comprises a respective length of each segment (F: abstract; figures 1-7; col. 2, line 66 to col. 4, line 20; col. 4, line 52 to col. 6, line 19; col. 7, lines 23-61).

- **Claim 13** pertains to the method according to claim 10, wherein the segmented transmission line comprises an air-spaced coaxial transmission line adapted for transmitting an RF signal, the predefined optimization criteria comprising signal transmission efficiency (F: abstract; col. 1, lines 10-13, col. 2, lines 18-30;).

- **Claim 14** pertains to the method according to claim 10, wherein a precision of the evaluation exceeds a manufacturing tolerance of the segmented transmission line (F: abstract; figure 1; col. 3, line 64 to col. 4, line 11; col. 6, lines 35-49; col. 6, line 64 to col. 7, line 7; col. 7, line 62 to col. 8, line 20).

- **Claim 15** pertains to the method according to claim 10, further comprising outputting a predicted performance of the segmented transmission line based on the respective segment characteristics (F: abstract; fig. 1-7; col. 1, line 31 to col. 2, line 17; col. 2, lines 41-54; col. 3, lines 10-20; col. 4, lines 14-32).

- **Claim 16** pertains to the method according to claim 10, further comprising the step of producing a set of transmission line segments according to the selected segment characteristics (F: abstract; figures 1-7; col. 2, line 66 to col. 4, line 20; col. 4, line 52 to col. 6, line 19; col. 7, lines 23-61).

- **Claim 17** pertains to the method according to claim 10, wherein a variation in respective segment characteristics is distributed substantially non-incrementally (F: abstract; figures 1-7; col. 2, line 66 to col. 4, line 20; col. 4, line 52 to col. 6, line 19; col. 7, lines 23-61).

- **Claim 18** pertains to the method according to claim 10, wherein a variation in respective segment characteristics is distributed substantially non-monotonically (F: abstract; figures 1-7; col. 2, line 66 to col. 4, line 20; col. 4, line 52 to col. 6, line 19; col. 7, lines 23-61).

- **Claim 19** pertains to a segmented transmission line, produced according to claim 16, wherein the segment characteristic comprises a respective segment length and the optimization criteria comprises a minimization of worst case VSWR over a radio frequency band (F: col. 1, line 31 to col. 2, line 17; col. 2, lines 41-54; col. 3, lines 10-20; col. 4, lines 14-32).

- **Claim 20** pertains to a segmented transmission line, produced according to claim 16, wherein the segmented transmission line comprises an air-spaced coaxial transmission line adapted for transmitting an RF signal (col. 1, lines 10-13, col. 2, lines 18-30); the segment characteristic comprises a respective segment length (F: abstract; figures 1-7; col. 2, line 66 to col. 4, line 20; col. 4, line 52 to col. 6, line 19; col. 7, lines 23-61) and the optimization criteria comprises a minimization of worst case VSWR over a radio frequency band (F: col. 1, line 31 to col. 2, line 17; col. 2, lines 41-54; col. 3, lines 10-20; col. 4, lines 14-32).

- **New claim 21** (F: abstract; figures 1-7; col. 2, line 66 to col. 4, line 20; col. 4, line 52 to col. 6, line 19; col. 7, lines 23-61).

Applicant's arguments have been fully considered but they are not persuasive. It is noted that Applicants only provide a short conclusory argument (pg. 8, paper # 5 and pp. 12-13 - Appeal Brief) that the applied art does not anticipate claims 10-11 and 13-20.

However, Applicants have not addressed the specific portions of the Fleming-Dalh patent, as indicated in the 102 rejection (paper # 4). Fleming-Dahl discloses a method for

optimizing the segment characteristics of a segmented transmission line, comprising the steps of modeling the electrical performance of the segmented transmission line, evaluating the model for electrical performance (F: col. 1, line 31 to col. 2, line 17; col. 2, lines 41-54; col. 3, lines 10-20; col. 4, lines 14-32), and selecting a set of segment characteristics (F: abstract; figures 1-7; col. 2, line 66 to col. 4, line 20; col. 4, line 52 to col. 6, line 19; col. 7, lines 23-61), based on the evaluation, which meets a set of predefined optimization criteria (F: abstract; col. 1, line 31 to col. 2, line 17; col. 2, lines 41-54; col. 3, lines 10-20; col. 4, lines 14-32).

Applicant's conclusory argument (see last sentence, page 8 to line 2, page 9, paper # 5 and page 13 - Appeal Brief) is not understood. Applicants conclusion that the Fleming-Dalh procedure is somehow not "optimum" is not persuasive. Please see section 2145 of the MPEP, recited for Applicant's benefit:

"2145 Consideration of Applicant's Rebuttal Arguments

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Other examples of conclusory arguments in the Appeal Brief include:

- arguments that "lumping parameters generally ignore higher order effects" (last paragraph, page 13 - the Examiner would like to point out that *this argument is based on a misunderstanding of the theoretical electromagnetic principles of distributed*

transmission line effects and has absolutely no basis in fact - Appellants have not provided any affidavit or evidence to back up their beliefs). *The Examiner queries how Appellants could carry out any analysis/optimization/modeling of a transmission without a "lumped" model.* In fact, Appellants refer to circuit models and s-parameters in the Appeal Brief (page 10). The Examiner, respectfully, is unaware of any circuit model which is more "accurate" than the lumped (RLC) models which are typically used in transmission line analysis ;

- Appellants provide commentary and opinion throughout the Appeal Brief concerning the applied prior art with specifically referring to any portion of the prior art;
- that the art does not teach a "complex aggregation of transfer functions" (second paragraph, page 15). Furthermore, the specification does not disclose "*complex aggregate* transfer functions";
- arguments pertaining to "computational complexity", "suboptimal results and "intractable solutions" (paragraph 3, page 15);
- arguments per claims 3, 12 that a particular model is not useful or sufficiently accurate (bottom, page 15);
- that the '326 invention is not optimized (first full paragraph, page 16).

The Examiner would also like to point out that a reference *anticipates* a claim if it discloses the claimed invention such that a skilled artisan could take its teachings in combination with his own knowledge of the particular art and be in possession of the invention. *In re Graves*, 36 USPQ2d 1697 (Fed. Cir. 1995); *In re Sasse*, 207 USPQ 107 (CCPA 1980); *In re Samour*, 197 USPQ 1 (CCPA 1978). *Appellants have not argued this point.*

Response to Argument - 103 Rejections

- Claims 1-9, 12 and 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over [Fleming-Dahl "F" (U. S. Patent 5,218,326 - of record) in view of Huss "H"].

Fleming-Dahl discloses a *method of defining component lengths, especially cable lengths, in a radio frequency or microwave system so as to minimize in-phase coupling of voltage reflections in the system involves the use of prime roots of prime numbers as scaling factors which are multiplied with a minimum component length to obtain a list of potential component lengths. The scaled potential component lengths are then screened for accidental relationships with component lengths obtained using lower order roots in order to prevent accidental harmonic relationships from arising in the system*, and the resulting screened list is evaluated to ensure that the remaining potential component lengths meet such system requirements as available spans, minimum and maximum component lengths, number of lengths required, and *matched Insertion Loss requirements*. In order to screen the scaled potential component lengths, windows are constructed around the potential lengths based on *component manufacturing tolerances*, and subsequently adjusted as necessary.

Transfer functions are inherent in the analysis and characterization of transmission lines. However, Fleming-Dahl does not explicitly teach transfer functions.

Huss discloses "*A mathematical and lumped-element model for multiple cascaded lossy transmission lines with arbitrary impedances and discontinuities.*" Huss further discloses a mathematical and lumped-element model for multiple cascaded lossy

transmission lines with arbitrary impedances and discontinuities is presented. The mathematical model is developed using the *ABCD matrix representation of a two-port network*. The lumped element model uses pole-zero approximations to *cable transfer functions*.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teaching of Fleming-Dahl with the teaching of Huss for the following reasons:

- Huss discloses (section II, page 1844) that “*There are several methods for describing a 2-port network. The most common method is to use S-parameters. However, for cascaded networks, the ABCD matrix is preferred...*”. Note that a transmission line is a two-port and is considered as such during analysis and simulation of transmission lines.

The claims are recited and the correspondence to the prior art is noted.

- **Claim 1** pertains to a computer model for describing a performance of a segmented transmission line having a plurality of segments, each segment having a transfer function, comprising:

(a) means for storing at least one characteristic value the transfer function of a respective segment of the segmented transmission line (**H: abstract; sections II-III; section V, pg. 1847**);

(b) means for storing information relating to at least one algorithm, said algorithm being for determining the effect of a respective characteristic value and sequence of transmission line segments on a performance of the overall segmented transmission line (**F: abstract; figures 1-7; col. 2, line 66 to col. 4, line 20; col. 4, line 52 to col. 6, line 19; col. 7, lines 23-61**); and

(c) means for adjusting a characteristic value (**F: abstract; figures 1-7; col. 2, line 66 to col. 4, line 20; col. 4, line 52 to col. 6, line 19; col. 7, lines 23-61**),

whereby a set of characteristic values may be defined for respective transmission line segments (**F: abstract; figures 1-7; col. 2, line 66 to col. 4, line 20; col. 4, line 52 to col. 6, line 19; col. 7, lines 23-61**), having an optimized performance in view of the at least one algorithm (**F: col. 1, line 31 to col. 2, line 17; col. 2, lines 41-54; col. 3, lines 10-20; col. 4, lines 14-32**).

Claim 2 pertains to the model according to claim 1, wherein the characteristic value is a length of a respective transmission line segment (**F: abstract; figures 1-7; col. 2, line 66 to col. 4, line 20; col. 4, line 52 to col. 6, line 19; col. 7, lines 23-61**).

Claim 3 pertains to the model according to claim 1, wherein the at least one algorithm calculates a transfer function of the segmented transmission line (**H: abstract; sections II-III; section V, pg. 1847**).

Claim 4 pertains to the model according to claim 1, wherein the adjusting means allows adjustment of all characteristic values, the adjustments being based on a determined performance of the segmented transmission line (**F: abstract; figs. 1-7; col. 1, line 31 to col. 2, line 17; col. 2, lines 41-54; col. 3, lines 10-20; col. 4, lines 14-32; col. 4, line 52 to col. 6, line 19; col. 7, lines 23-61**).

Claim 5 pertains to the model according to claim 1, wherein the segmented transmission line comprises an air-spaced coaxial transmission line adapted for transmitting an RF signal, the performance comprising signal transmission efficiency (**F: col. 1, line 31 to col. 2, line 17; col. 2, lines 41-54; col. 3, lines 10-20; col. 4, lines 14-32**).

Claim 6 pertains to the model according to claim 1, wherein a precision of the algorithm exceeds a manufacturing tolerance of the segmented transmission line (**F: abstract; figure 1; col. 3, line 64 to col. 4, line 11; col. 6, lines 35-49; col. 6, line 64 to col. 7, line 7; col. 7, line 62 to col. 8, line 20**).

Claim 7 pertains to the model according to claim 1, further comprising means for outputting a predicted performance of the segmented transmission line based on the respective characteristic values (**F: abstract; figs. 1-7; col. 1, line 31 to col. 2, line 17; col. 2, lines 41-54; col. 3, lines 10-20; col. 4, lines 14-32**).

Claim 8 pertains to the model according to claim 1, wherein the respective characteristic values are substantially non-incrementally distributed across a range (**F: abstract; figures 1-7; col. 2, line 66 to col. 4, line 20; col. 4, line 52 to col. 6, line 19; col. 7, lines 23-61**).

Claim 9 pertains to the model according to claim 1, wherein the respective characteristic values are substantially non-monotonically distributed across a range (**F: abstract; figures 1-7; col. 2, line 66 to col. 4, line 20; col. 4, line 52 to col. 6, line 19; col. 7, lines 23-61**).

Claim 12 pertains to the method according to claim 10, wherein the model is evaluated to determine a transfer function of the segmented transmission line (H: abstract; sections II-III; section V, pg. 1847).

- New claim 22 (see claim 1, discussed earlier);
- New claim 23 (F: abstract; figures 1-7; col. 2, line 66 to col. 4, line 20; col. 4, line 52 to col. 6, line 19; col. 7, lines 23-61).
- New claim 24 (F: col. 1, line 31 to col. 2, line 17; col. 2, lines 41-54; col. 3, lines 10-20; col. 4, lines 14-32).
- New claim 25 (F: abstract; figures 1-7; col. 1, line 31 to col. 2, line 17; col. 2, line 41 to col. 4, line 20; col. 4, line 52 to col. 6, line 19; col. 7, lines 23-61).

Appellants have, for the most part, only offered conclusory remarks about the prior art (see earlier discussion relating to the 102 rejections).

Appellants have only alleged (pg. 9, paper # 5) that “...it is not seen that the combination has any logic or motivation.” by apparently arguing (paragraph 2, page 9, paper # 5) that the modification of the Fleming-Dalh teaching by the use of transfer functions as taught by Huss is not enabled. Applicants are reminded that they have not disclosed *transfer function*, or *how it is to be used* in the context of Applicant’s invention, in the “detailed description” of the specification. Applicants are also reminded that transfer functions are inherent in the design, characterization and analysis of transmission lines.

Applicants are also reminded that 112(1) rejections were applied stating that *the specification does not provide any substantive detail*, other than mere reference, to a *model, characteristic values, transfer functions, algorithms, distributions, and means for optimization* (see claim 1, for example). The Examiner notes that Appellant’s general

argument against the 112(1) rejections was that such features were known to those in the art.

Appellants (last paragraph, page 13 - Appeal Brief) provide conclusory argument that Huss by "approximating the attenuation and non-linear phase characteristics of the transmission line" loses significant higher order factors. Appellants do not disclose what factors they are referring to. In any case, Appellants have not disclosed any details of any model, whether an approximation or analytical, closed form (*without approximation*), solution.

It is respectfully submitted that the Huss teaching of transfer functions as used to modify the teaching of Fleming-Dalh is *at least as enabling as that disclosed in Applicant's disclosure*, wherein Applicants are *silent* on the subject of transfer functions, in the detailed description of the invention. Huss discloses (section II, page 1844) that "*There are several methods for describing a 2-port network. The most common method is to use S-parameters. However, for cascaded networks, the ABCD matrix is preferred...*". Note that a transmission line is a two-port and is considered as such during analysis and simulation of transmission lines. *Appellants have provided no evidence to the contrary.*

The Examiner further notes Applicant's argument (third full paragraph, page 9, paper # 5) that the sequence of lengths need not be and generally will not be, monotonic. *This also means that the sequence can be monotonic.*

Applicant's argument (page 10, paper # 5 and paragraph 3, page 15 - Appeal Brief) is noted. The Examiner submits that arguments relating to *computational complexity* are mere attorney argument (see section 2145 of the MPEP). Applicants then admit (second sentence, page 10, paper # 5) that the present invention has been previously

carried out manually. However, mere automation of a well known process is insufficient to distinguish over the prior art. See *In re Venner*, 262 F.2d 91, 95, 120 USPQ 193, 194 (CCPA 1958) (Appellant argued that claims to a permanent mold casting apparatus for molding trunk pistons were allowable over the prior art because the claimed invention combined “old permanent-mold structures together with a timer and solenoid which automatically actuates the known pressure valve system to release the inner core after a predetermined time has elapsed.” The court held that broadly providing an automatic or mechanical means to replace a manual activity which accomplished the same result is not sufficient to distinguish over the prior art.).

In summary:

- Appellants provide commentary and opinion throughout the Appeal Brief concerning the applied prior art with specifically referring to any portion of the prior art;
- The specification *does not provide any substantive detail*, other than mere reference, to a *model, characteristic values, transfer functions, algorithms, distributions, and means for optimization* (see the limitations in claim 1, for example). Furthermore, Appellants have not actually or persuasively argued the merits of the 112(1) rejection, specifically whether the *instant specification* is enabled. Furthermore,

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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